









Tool Selection Guide

Thread milling / drill thread milling

				Thread Ø2 - Ø20...										
				MKG Thread milling			MGF Thread milling & chamfering				MGF Thread milling and chamfering			
Material	Material groups	Hardness (HB)	Code	MKG	MKG	MKG XH	MGF	MGF	MGF XS	MGF XH	UMGF	UMGF	PCD-MGF	
			Cutting mat.	solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	PCD
			Surface	uncoated	TiCN	TiAlN	uncoated	TiCN	TiCN	TiAlN	uncoated	TiCN	uncoated	
			Chapter	5		5	1		1	1	2		7	
			Strength (N/mm ²)											
1. Steel	P	1.1 Magnetic soft iron	≤120	≤400	●			●				●		
		1.2 Structural, case hardened steel	≤200	≤700	●			●				●		
		1.3 Carbon steel	≤250	≤850	●			●				●		
		1.4 Alloy steel	≤250	≤850	●			●				●		
		1.5 Alloy/heat treated steel	>250, ≤350	>850, ≤1200	○			○	●			○		
		1.6 Alloy/heat treated steel	>350	>1200	○			○	●			○		
	H	1.7 Hardened steel to 45 HRC	≤400	≤1400	○	●		○		●		○		
		1.8 Hardened steel to 58 HRC	≤600	≤2200		●				●				
2. Stainless steel	M	2.1 Stainless steel, sulphuretted	≤250	≤850	●			●				●		
		2.2 Austenitic	≤250	≤850	●			●				●		
		2.3 Ferritic, ferritic & austenitic, martensitic	≤300	≤1000	●			●				●		
3. Cast iron	K	3.1 Grey cast iron	≤150	≤500	○	●		○	●		○	●		
		3.2 Grey cast iron, heat treated	>150, ≤300	>500, ≤1000	○	●		○	●		○	●		
		3.3 Vermicular cast iron	200-250	400-500		●			●			●		
		3.4 Spher. graph. cast iron	≤200	≤700	○	●		○	●		○	●		
		3.5 Spher. graph. cast iron, heat treated	>200, ≤300	>700, ≤1000		●			●			●		
		3.6 Malleable iron	≤200	≤700		●			●			●		
		3.7 Malleable iron, heat treated	>200, ≤300	>700, <1000		●			●			●		
4. Titanium	S	4.1 Pure titanium	≤200	≤700		●			●			●		
		4.2 Titanium alloys	≤270	≤900		●			●			●		
		4.3 Titanium alloys	>270, ≤300	>900, ≤1250		●			●	●		●		
5. Nickel	S	5.1 Pure nickel	≤150	≤500		●			●			●		
		5.2 Nickel alloys, heat resistant	<270	≤900		●			●			●		
		5.3 Nickel alloys, high heat resistance	>270, ≤350	>900, ≤1200		●			●	●		●		
6. Copper	S	6.1 Non-alloy copper	≤100	≤350	●	○		●	○		●	○		
		6.2 short chip, brass, bronze, red brass	≤200	≤700	●	○		●	○		●	○	●	
		6.3 long chip brass	≤200	≤700	●	○		●	○		●	○		
		6.4 Cu-Al-Fe alloy (Ampco)	≤470	≤500	●	○		●	○		●	○		
7. Aluminium/ Magnesium	N	7.1 Alu, Mg non-alloy	≤100	≤350	●	○		●	○		●	○	●	
		7.2 Alu wrought alloy, breaking strain (A 5) <14 %	≤180	≤600	●	○		●	○		●	○	●	
		7.3 Alu wrought alloy, breaking strain (A 5) ≥14 %	≤180	≤600	●	○		●	○		●	○	●	
		7.4 Alu cast alloy, Si <10 %	<180	≤600	●	○		●	○		●	○	●	
		7.5 Alu cast alloy, Si ≥10 %	≤180	≤600	○	●		○	●		○	●	●	
8. Plastics	S	8.1 Thermoplastics			●	○		●	○		●	○		
		8.2 Thermosetting plastics			●	○		●	○		●	○		
		8.3 Fibre reinforced plastics			○	●		○	●		○	●	●	

● very good ○ good

...Thread Ø2 - Ø20						Thread > Ø20								
BGF Drilling, chamfering and thread milling						GWF SR Thread milling				GWF GP Circular spotface & chamfering, thread milling		XAM Thread milling		GWF CUT Thread milling
BGF	BGF	BGF NZ4	UBGF	UBGF	DBGF	GWF SR	GWF SR	GWF XS	PCD-GWF SR	GWF GP	GWF GP	XAM	XAM	GWF CUT
solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	solid carbide	PCD	solid carbide	solid carbide	carbide insert	carbide insert	s.c.-head
uncoated	TiAlN	AlCrN	uncoated	TiAlN	TiAlN	uncoated	TiCN	TiCN	uncoated	uncoated	TiCN	uncoated	TiN	TiAlN
3		4	4		4	6		6	7	6		6		6
					●			●				●		●
					●			●				●		●
					●			●				●		●
					●			●				●		●
					●			●				●		●
					●			●				●		●
					●			●				●		●
					●			●				●		●
					●			●				●		●
					●			●				●		●
					●			●				●		●
					●			●				●		●
					●			●				●		●
⊖	⊖	●	⊖	⊖	●	⊖	●			⊖	●	⊖	●	●
⊖	⊖	●	⊖	⊖	●	⊖	●			⊖	●	⊖	●	●
					●		●				●		●	●
	●			●	●	⊖	●			⊖	●	⊖	●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
					●		●				●		●	●
●	⊖		●	⊖	●	●	⊖		●	●	⊖	●	⊖	⊖
●	⊖		●	⊖	●	●	⊖		●	●	⊖	●	⊖	●
●	⊖		●	⊖	●	●	⊖		●	●	⊖	●	⊖	●
●	●		●	⊖	●	●	⊖		●	●	⊖	●	⊖	●
⊖	●		⊖	●	●	⊖	●		●	⊖	●	⊖	●	⊖
●	⊖		●	⊖	●	●	⊖		●	●	⊖	●	⊖	●
●	⊖		●	⊖	●	●	⊖		●	●	⊖	●	⊖	●
⊖	●		⊖	●	●	⊖	●		●	⊖	●	⊖	●	●

● very good ⊖ good